Army Pre-positioned Stocks

Lieutenant Colonel Michael S. Tucker, US Army

In war, nothing is achieved except by calculation. Everything that is not soundly planned in detail yields no results.

— The Maxims of Napoleon

THE BRIGADE OPERATIONS officer met us immediately upon our return from the National Training Center (NTC). During the short ride back to post, he briefed the brigade's leadership on the division's pending deployment to Kuwait which had been directed in response to Saddam Hussein's latest spat with the United Nations Inspection Team. The advance party had already departed. Our brigade was designated as Force Package Two (FP2), which meant that we would draw equipment from Army Pre-Positioned Stocks, (APS-3), a heavy brigade of equipment with all combat support and combat service support afloat in ships. The next few weeks revealed simple questions that quickly became million-dollar queries as we began the process of educating ourselves on what we did not know about APS-3.

What type of mortars are loaded on the ships—4.2-inch or 120mm? Do the vehicles come with complete basic issue equipment? Are any major end items missing or unserviceable? What is the status of sets, kits and outfits (SKO)? Is the communications equipment Vehicular Intercom-1 (VIC-1) or VIC-3, and are the necessary installation kits and diagnostic equipment available? With pressure from airlift planners to specify how many pallets of equipment to accompany troops (TAT) were required, it was difficult to determine what we should take besides individual equipment. Not surprisingly, we erred on the safe side and palletized practically everything imaginable, only to increase our airlift requirements.

For commanders who are well into executing a deployment, such logistical issues are problematic and must be resolved prior to their forces' arrival in theater. While our cries for information were met with noble attempts by various agencies to find answers during the unanticipated delay in deployment, two things became quite evident: there was no existing system to provide such information, and even more important, there was no excuse for such uncertainty.

This article critically examines the Army's Pre-positioned Afloat program (APA) from the user's perspective and provides recommendations for ensuring that warfighting commanders and APS planners have the necessary detail to plan and execute the commander in chief's (CINC's) military strategy. However, understanding the current status of APS-3 requires a brief look at the genesis of this key link in our nation's strategic mobility triad (SMT)—airlift, sealift and pre-positioned equipment—and an explanation of why it is so important to our National Security Strategy (NSS).

The Army's pre-positioned fleet minimizes initial strategic sealift requirements and facilitates the early deployment of Army heavy brigade forces, delivers theater-opening CS and CSS forces and port-opening equipment, and provides sustainment stocks for an AO. Ideally, the equipment will be fully operational with deployed troops within 15 days of notification.

APS-3 was born out of necessity as the end of the Cold War and the corresponding reductions in Europe forced the Army to transition from a threat-based to a capability-based strategy. This shift required military planners to rely increasingly on units based in the Continental United States, with greater response times, to meet emerging asymmetrical threats. However, the difficulties executing the operational requirements of such a strategy became

apparent during Operation *Desert Shield*, when military planners experienced significant deficiencies in our ability to project heavy forces into a theater.

During the pre-Gulf War period, the first APA fleet consisted of four ships used primarily for transporting ammunition and port handling equipment. The Marines, on the other hand, had developed a maritime pre-positioning force (MPF) as early as 1979, consisting of 13 ships organized into three maritime pre-positioned squadrons (MPSRONs). Their concept was validated during *Desert Shield* when the MPF provided the first heavy armor capability in theater.[1]

While the APA Mobile Training Team program detailed in FM 100-17-1,* Army Pre-positioned Afloat Operations, *is sound, it is only as good as the timeliness of the training itself. Conducting it during an N-hour sequence is too late. It must be planned well in advance on a unit's long-range training calendar.

Noting this success, the Office of the Joint Chiefs of Staff (JCS) began reassessing US mobility forces. Their 1992 Mobility Requirements Study (MRS) revealed that neither our current nor our estimated future ability to project strategic power met the demands of the NSS. Consequently, the study proposed new airlift and sealift forces while recommending that the Army pre-position sets of heavy equipment aboard ships staged close to potential trouble spots.

To address the MRS with the Army Strategic Mobility Program (ASMP), which published its action plan in March 1993. It prompted the Army to develop the capability to provide a corps-size force of 5.5 divisions at C+75.[2] The doctrine this plan initiated highlights the importance of APS-3 in this force projection-crisis response strategy:

- "A light or airborne brigade-size force to be inserted into theater by C+4, with the remainder of the division to close not later than C+12. The force, including its personnel, equipment and logistical support structure, [will] be transported by air.
- An afloat heavy combat brigade with support to close into the theater, and be ready to right not later than C+15. The APA brigade force [will] be a 2X2 heavy brigade: two armored, two mechanized battalions plus support. APA also provides theater-opening combat support (CS) and combat service support (CSS) units and sustainment stocks for 30 days of contingency. This force [will] be organized into force modules tailored to meet the CINCs needs.
- By C+30, two heavy divisions—a mix of mechanized infantry, armored or air assault forces, depending on the theater commander's priorities, including the logistical support structure—[will] close in theater. The equipment for the heavy force [will] transit by sealift.
- The remaining force—two divisions and support—[will] close by C+75."[3]

Based on the Marine's MPF concept, the Army's pre-positioned fleet is designed for rapid deployment and employment of an Army heavy brigade into secured ports in an area of operations (AO).[4] This capability provides a combatant commander with the flexibility to reinforce and enhance an established lodgment, while providing initial sustainment of deploying contingency forces.[5] Essentially, the APA minimizes initial strategic sealift requirements and facilitates the early deployment of Army heavy brigade forces, delivers theater-opening CS and CSS forces and port-opening equipment, and provides sustainment stocks for an AO. Ideally, the equipment will be operational within eight days of initial discharge and fully operational with deployed troops within 15 days of notification.

APS-3 Composition. Currently, the heavy brigade afloat consists of two tank and two mechanized infantry battalions, one self-propelled artillery and one combat engineer battalion, a battery of air defense artillery, all required CSS, and 15 days of supply loaded on a fleet of 14 ships—a combined total of 870,000 square feet of cargo.[6] Under ideal conditions, ships can be underway from their loiter locations to predesignated port facilities in Southwest Asia or Northeast Asia within four hours of notification. By 2003, APS-3 will include enough equipment for two heavy brigades and a corps/theater base. This will be loaded onto eight new Large Medium-Speed Roll On-Roll Off (LMSR) ships that, along with two container ships, two ammunition ships and one crane ship, will resource the APA program and provide the Army with two million square feet of materiel to support power projection. Additionally, 11 refurbished LMSRs will provide surge sealift for follow-on divisions and sustainment, and complete the sealift requirements of the SMT out to 2010.[7]

The APA program has been a godsend for military strategists struggling to plan for operations in two nearly simultaneous major theaters of war (MTW).[8] It accomplishes in days what took months


US Army

Pre-positioned vehicles at APS-5, Camp Doha, Kuwait.

When Army units are designated to participate in* INTRINSIC ACTION*, they start a six-month journey of coordination liaison meetings with Army Central Command-Kuwait (ARCENT-K) and the contractor, ITT. Unit logisticians, executive and operations officers and even commanders make three trips to APS-5 Kuwait to meet with representatives from every organization involved in their deployment.

during *Desert Storm*—with more than four times the efficiency—and is unmatched by any other military force in the world. Although APS-3 deters potential adversaries and equips US warriors, customers must better understand how this system works. Likewise, APS-3 planners need to hear directly from warfighters.

Improving APS-3. The Deputy Chief of Staff for Logistics (DC-SLOG) and Army Materiel Command (AMC), among others, have made Herculean efforts to plan and execute this program. In a few short years the program has evolved dramatically in both size and capability. However, the system suffers from a shortfall that can be met only through close coordination between APS planners and warfighters. To work reliably, APS-3 must address two challenges—inventory visibility and hands-on unit training by forces designated to draw the equipment.

Major commands (MACOMs) tasked to perform contingency missions know well in advance (often 12 to 18 months) when readiness cycles will affect their units. At the direction of the supported CINC, the corps commander will identify contingency force pool units—units assigned to execute or support the APA mission.[9] To manage these cycles, Force Package One (FP1) and FP2 units are designated. One of the force packages will be airlifted to pre-positioned equipment, while the follow-on force package will be airlifted to join APS-3 at a port. Why then do we typically wait until an alert to determine the status of APS-3? For example, all of the questions raised in this article's opening vignette could have been addressed months earlier.

When Army units are designated to participate in *INTRINSIC ACTION*, they start a six-month journey of coordination liaison meetings with Army Central Command-Kuwait (ARCENT-K) and the contractor, ITT.[10] Unit logisticians, executive and operations officers and even commanders make three trips to APS-5 Kuwait to meet with representatives from every organization involved in their deployment. Unit commanders and staffs study every phase of reception, staging, onward-movement and integration (RSOI).

A fourth coordination meeting is conducted when ARCENT-K and its representatives visit the unit at its home station to discuss final details and draw-yard procedures. When the unit finally deploys there are no surprises. The equipment draw and movement to tactical assembly areas occur within hours after arrival in country. Units participating in *INTRINSIC ACTION* observe the same template used by units deploying to the NTC and thus experience how they will deploy in an APS-5 or TAT-only scenario.

Months prior to their departure, units deploying to Kuwait or the NTC have access reams of information about equipment they will draw. However,

imagine for a moment conducting the same operation from a cold start, with no coordination or detailed knowledge about the equipment prior to a notification-hour (N-hour) sequence.[11] Add the fact that drawing APS-3 stocks is not a routine operation, but an entry in a relatively uncharted AO. In fact, APS-3 has been exercised only once, in October 1994, when the 3d Brigade Combat Team of the 24th Infantry Division (Mechanized) (now the 3d Infantry Division [Mechanized]) deployed to Southwest Asia as part of Operation *Vigilant Warrior*.[12] Smaller-scale exercises of APS-3 have been conducted since *Vigilant Warrior*, but none of these involved the entire set of equipment.[13]

Planners must identify opportunities when a download of the equipment as part of a sea emergency readiness exercise includes both RSOI and maneuver training. Training and readiness options could include a rotation of the APA fleet with other existing pre- positioned fleets such as the one at Doha, Kuwait or the NTC. Both of these fleets are approaching overuse and should stand down for maintenance.

Challenges with Inventory Management. APS-3 is managed by the Army War Reserve Support Command in Rock Island, Illinois, and is maintained by Combat Equipment Group-Asia (CEG-A), located in Charleston, South Carolina. CEG-A is responsible for the maintaining all major end items assigned to the APS-3 inventory, to include SKOs. CEG-A monitors these systems with inventory software called Army War Reserve Deployment System (AWRDS).

While AWRDS assists CEG-A's inventory control of major end items, it has several shortcomings that can critically affect deployment. First, AWRDS loses sight of equipment while it is downloaded off the ship during the 90-day maintenance cycles, which occur once every 30 months. This lack of visibility causes problems for APS-3 managers who, in response to lessons learned from *Vigilant Warrior*, monitor unit set integrity as an important detail for warfighters. But, problems arise when a combat system is delayed in long-term maintenance, and is not available for reload with the set. This is important information for managers who must then draw on other inventories, such as inactive warstocks, to compensate for the unanticipated shortages within the set.

Furthermore, AWRDS does not know when unit sets are spread over several ships because it monitors only like-unit sets. When a task-organized unit is stowed on several ships, it becomes very difficult for the commander to identify his equipment. In effect, he does not know what is where. This is especially true for CS and CSS units because the various support elements are task-organized with units.[14] Depending on the nature of support, it is not uncommon to find a CSS unit's equipment spread across six ships. However, AWRDS only provides asset visibility on a given ship and does not indicate which other ships may be carrying like-unit equipment. This can be determined only through surveying the inventory of other ships to account for the entire unit. The inventory management system has another shortcoming: while it accounts for SKOs, it does not provide detailed asset resolution for items within these SKOs.

One valuable tool available to commanders facing these challenges is the Automated Battlebook System (ABS). Stored on a compact disc, this planning tool provides the warfighter windows-based software to help identify APS-3 inventory stocks. Although the ABS data is only as good as the information loaded from AWRDS, it does provide important information on the status of the major end items on a given ship.

Unit Training and Prior Coordination. Prior coordination between warfighting units and APS-managers can identify actual inventory shortcomings, to include authorized stockage levels and prescribed load lists, thus allowing planners to adjust TAT requirements.

Coordination also helps continuously modernize equipment in APS-3. For example, the US Navy Ship *Watson* is loaded with M106A6 Paladin 155mm self-propelled howitzers, M2A2 *Desert Storm* Bradley Infantry Fighting Vehicles and Bradley Stinger Fighting Vehicles.[15] Nonetheless, a latency factor will persist because APS-3 cannot feasibly match the pace of changes to unit tables of organizational equipment. Since APS-3 stocks are updated only once during the maintenance cycle, differences will likely exist between home station and pre-positioned equipment. However, when commanders can be certain of the actual type of equipment they will draw, they can adjust their forecasts to provide appropriate training and preparation.

Other programs are also available to assist commanders in planning and preparing for an APS-3 deployment, such as the APA Mobile Training Team (MTT). This team visits units identified at the beginning of their APA training cycle, 90 days out, and trains them as the curriculum below details:

- In-brief the entire chain of command, to include the support structure (corps, division, instal-

Military Sealift Command

Equipment loading on the Maritime Pre-position Ship USNS *2nd LT John P. Bobo.* The great scale of such vessels can be seen in the inset view of the USNS *CPL Michael Red Cloud Jr's* two starboard vehicle ramps and stern slewing ramp. The *Red Cloud* carries over 1,000 vehicles including 58 tanks and 48 other tracked vehicles.

The Army War Reserve Deployment System (AWRDS) does not know when unit sets are spread over several ships because it monitors only like-unit sets. When a task-organized unit is stowed on several ships, it becomes very difficult for the commander to identify his equipment. In effect, he does not know what is where. This is especially true for CS and CSS units because the various support elements are task-organized with units.

lation, brigade, and CSS commanders and staffs), to give all participants an overview of the program, establish relationships and assign responsibilities.

- Provide updated APA ship battle book data, to include complete equipment lists, current maintenance status of equipment and supplies aboard APA ships, review of load plans and identification of any force modernization issues.
- Establish an initial equipment transfer plan.
- Conduct an intensive training session on Off-load Pre-positioned Party (OPP) requirements and procedures for discharge and accountability transfer.
- Inform the brigade of source intelligence equipment required for linkages within theater if it is not already available.
- Perform liaison visits to appropriate commands.[16]

Unfortunately, because of budget cuts, MTT visits have been curtailed and are no longer funded by Headquarters, Department of the Army. This misfortune is due in part to the initial assumption that MTT would be a one-time event per division. But, this assumption failed to account for personnel turbulence and a lack of institutional training to sustain the skills taught by the MTT.[17]

Currently, the MTT funding burden falls on US Army Forces Command, which continues to struggle to resource the program. Training through distance learning and education using video teleconferences has yet to prove its utility to either party.[18] The muddling has prompted discussion about whether such training is even necessary. Consequently, APA MTT has been tied up in a who-is-responsible, who-will-task and who-will-pay bureaucratic cycle.[19]

Recommendations. A great effort is already underway to address some of the problems identified in this article. For example, APS-3 managers recognize problems with the inventory system and are looking at ways to correct them.[20]

While the APA MTT program detailed in FM 100-17-1, *Army Pre-positioned Afloat Operations,* is sound, it is only as good as the timeliness of the training itself. Conducting it during an N-hour sequence is too late. It must be planned well in advance on a unit's long-range training calendar. Ideally, APS-3 training and its integration in RSOI should be a highlighted event during a division semi annual training brief. Further, such contingency planning should be added as a supporting battle task as part of the division's mission essential task list.

FM 100-17-1 details what a commander needs to consider when planning APA operations. Incredibly, a surprising number of warfighters and logisticians have never seen or heard of the FM 100-17 series of manuals, in part because APS-3 is not being taught as a system of power projection in Training

and Doctrine Command schools. Junior leaders are arriving at units unaware of APS its critical role in meeting the nation's strategic mobility requirements.

The POMCUS (pre-position of materiel configures to unit sets) Inspection Reconnaissance Program (PIRP), was a required activity prior to any *REFORGER* exercise.[21] The APS-3 system can only get better with similar inspections and more involvement from warfighters.

Other opportunities also need to be explored to maintain the readiness of the APS-3 program. For example, the need to exercise the equipment cannot be over emphasized. Planners must identify opportunities when a download of the equipment as part of a sea emergency readiness exercise includes both RSOI and maneuver training. Other training and readiness options could include a rotation of the APA fleet with other existing pre-positioned fleets such as the one at Doha, Kuwait, or the NTC. Both of these fleets are approaching overuse and should stand down for maintenance.[22]

Currently, the warfighting community has lost its vote. As the primary customers, commanders must have a voice in the management of the equipment their soldiers will use in combat. Although US Army Forces Central Command can provide APA managers with valuable data about the AO and force integration requirements focused at the operational level, tactical equipment issues are better fielded at the division level, where the fidelity required for warfighting commanders to plan for a "come as you are" conflict is most assured.

APS-3 can only get better as warfighters train with it and learn how to assess its status in real time and minute detail. Coordination between the supplier and user must begin at the CINC level to allocate resources and assure this valuable program's success. We know what right looks like. Now we must make APS-3 work right for the soldiers who ultimately depend on it. ***MR***

NOTES

1. The White House, *A National Security Strategy for a New Century*, (Washington D.C: The White House, May 1997), i.
2. The date at which a unit begins deployment is referred to as "C" day.
3. US Army Field Manual (FM) 100-17-1, *Army Pre-positioned Afloat Operations* (Washington, DC: Headquarters, Department of the Army, 27 July 1996), iv.
4. Army Pre-Positioned Stocks (APS) Afloat (APS-3) rapidly provides a heavy brigade of two tank and two mechanized battalions (2X2) with a support slice and sustainment supplies to a combatant CINC anywhere in the world. However, it belongs to no CINC but is a swing stock maintained combat-ready by Army Material Command (AMC). Additionally, it provides a force support package, watercraft and other equipment to provide early port opening in an area where insufficient port facilities exist. APS-3 also can provide early entry equipment into a area when used in military operations other than war (MOOTW) through selected discharge of embarked equipment and supplies. Dr. Derek Povah, Plans and Operations Branch, Power Projection Logistics Division, Deputy Chief of Staff for Logistics at Army Forces Command. Derek Povah <povahderek@forscom.army.mil> "APS-3" electronic mail message to <tuckerm@awc.carlisle.army.mil>, 12 December 1998.
5. FM 100-17-1.
6. Kim A. Richards, "Prepo Afloat: Key to Power Projection" *Army Logistician*, January-February 1998, 24-26.
7. 3.5 billion has been budgeted for FY 00-05, with an annual requirement of 575 million per year. Interview with Mr. J. Kern, Army War Reserve Division, Deputy Chief of Staff for Logistics (DCSLOG), the Pentagon on 5 November 1998.
8. "Our military must be able to transition to fighting major theater wars from a posture of global engagement—from substantial levels of peacetime engagement overseas as well as multiple concurrent smaller-scale contingencies." The White House, *A National Security For A New Century*, 22.
9. FM 100-17-1, 2-3.
10. ITT is a civilian contractor who maintains APS-5 at Camp Doha, Kuwait. ITT at one time stood for International Telephone and Telegraph. The company has since diversified into many other contracts and dropped the title International Telephone and Telegraph but kept ITT as their logo.
11. The term "N-Hour" sequence refers to the time at which a unit is officially notified of a deployment.
12. Lawrence J. Wark, "Army War Reserve-3: Pre-positioned Equipment Afloat," *Infantry*, March-April 1996, 7. Third Army has planned an exercise *NATIVE ATLAS* in the spring of 2000, in which one battalion set of equipment from APS-3 is scheduled to be downloaded and exercised.
13. A company of equipment was unloaded from the Cape Horn in the United Arab Emirates (UAE) during CENTCOM Exercise *IRON FALCON* in March-April 1996. In 1997 the *American Cormorant* was off-loaded as part of Exercise *BIG RED*, and the *Gopher State* participated in a 1998 exercise. These latter two ships contain port opening equipment and do not involve linking up with large troop units. John Kern <H.kernjh@HQDA.army.mil>. "APS-3 Exercises" electronic mail to LTC Michael S. Tucker <tuckerm@awc.carlisle.army.mi1>, 16 December 1998.
14. These elements are commonly called "habitual slice elements" which come in the form of a fire support element, maintenance support team, combat engineers and an air defense platoon. All of these elements belong to parent battalions within the division structure.
15. The *Watson* will carry the most modern of all equipment currently afloat, including 48 each M1000s/M1070s in support of two heavy equipment transport platoons. Extracted from Briefing by United States Army Logistics Evaluation Agency, at Defense Distribution Region East, 5 November 1998.
16. FM 100-17-1, AI.
17. Leadership at DCSLOG made the funding cut decision based on the training being a continuous FORSCOM mission requirement. However, according to Mr. John Kern, Deputy, War Reserve Division, Office of the Deputy Chief of Staff for Logistics, FORSCOM AO's have been told to submit funding for MTT in the next program objective memorandum. Currently a cost model for a MTT visit to a unit is $1OK. During the recent MTT to 3ID(M), FORSCOM used contingency funds to finance the visit. Anthony Kral <H.krala@emh5.stewart.army.mil>"APS-3" electronic mail to <tuckerm@awc.carlisle.army.mil>, 30 November 1998.
18. The first distance learning workshops took place 21-23 September 1998 at Fort Hood, Texas over the Tele-Net. Results were disappointing. Distance learning does not support the initial hands-on portion of instruction. Technical difficulties caused considerable loss of instruction time. Student turnout was low. All too often such training, if not placed on the unit's long range calendar, will not receive proper resourcing and emphasis, especially if the training has not been endorsed by senior leaders. Derek Povah <povahderek@forscom.army.mil>; and "APS-3" electronic mail message to <tuckerm@awc.carlisle.army.mil>, 16 December 1998.
19. Derek Povah, "APS-3 First Distance Learning Via Tele-Net from Fort Eustis, Virginia, to Fort Hood, Texas, 21-24 September 98-AFTER ACTION REPORT"; electronic mail message to Joseph Nesbitt <NesbiJG@hqda.army.mil> on 1 October 1998; Derek Povah <povahderek@forscom.army.mil>, "ABS Training for 3ID during Nov 98"; electronic mail message to CPT Gerard J. Overbey on 5 October 1998.
20. Per phone interview with Scott Wessinger of Stanley Corporation on 16 December 1998, a 3.0 ABS beta version has been developed to correct most of the database software problems identified in this paper. This beta version was demonstrated during a recent MTT visit to 3d Infantry Division (Mech) in November 1998.
21. The PIRP "pie-rep" was conducted by advance party months prior to any *REFORGER* exercise. The intent was for units to pre-inspect equipment which they would draw in the months ahead and receive briefings on their unit's equipment issue.
22. USCENTCOM's *INTRINSIC ACTION* was a 60-day exercise conducted two to three times a year to allow for maintenance downtime. Since April 1996, unit participation in *INTRINSIC ACTION* has been continuous, with units rotating every four months, and leaving little to no maintenance downtime. APS-5 is now approaching the same maintenance challenges the NTC has experienced with its "Blue and Gold" fleet; one fleet has to be used to replace the non-mission capable (NMC) vehicles in the fleet being issued. Over time this practice causes two fleets to be maintained to meet the recurring demands of having one fleet always deployed (issued to units).

Lieutenant Colonel Michael S. Tucker is the G3, 3d Infantry Division (Mechanized), Fort Stewart, Georgia. He received a B.S. from the University of Maryland, an M.P.A. from Shippensburg University and an M.M.A.S. from the US Army Command and General Staff College and is a graduate of the Army War College. He has served in a variety of command and staff positions in the Continental United States, including commander, 1st Battalion, 64th Armor, 2d Brigade, 3rd Infantry Division (Mechanized), Fort Stewart, Georgia; joint operations instructor, Air Command and General Staff College, Maxwell Air Force Base, Alabama; assistant professor, United States Army Military Academy, West Point, New York; and S-3 operation officer, 1st Battalion, 35th Armor, 2d Brigade, 1st Armored Division during Operation Desert Storm.